REMARKS

Claim 16 has been amended to incorporate the limitations of claim 19, which has been cancelled. Claim 20, which previously depended on claim 19, has been amended to depend on claim 17.

The finality of the restriction requirement is noted. Applicant confirms the election of claims 17-22, and requests that the non-elected claims be maintained in the application, without further Action for possible rejoinder and/or for filing of one or more divisional applications.

The rejection of claims 18, 20 and 22 under 35 USC 112, second paragraph is respectfully traversed. Each of the objected to terms is found in many U.S. patents. For example, a recent search of the USPTO database for patents having claims containing the term "about" showed 688,269 patents issued since 1976 with the term "about" in the claims. The term "room temperature" is found in the claims of 17,126 patents issued since 1976. The term "substantially" is found in the claims of 747,043 patents issued since 1976. And, the term "slightly" is found in the claims of 51,650 patents issued since 1976. Printouts of the first page of the above mentioned PTO database searches are enclosed for the convenience of the Examiner.

Moreover, several of the U.S. patents of record in this application have claims including the term "about", "substantially", and "approximately". See, for example, claims 6 and 9 of U.S. patent 3,044,879. See also claims 13 and 18 of U.S. patent 4,104,409. And, see claim 5 of U.S. patent 4,282,259, and claims 2 and 3 of U.S. patent 4,324,810, and claims 1 and 3 of U.S. patent 4,759,941, and claims 1, 8, 9, 18 and 19 of U.S. patent 4,918,240, and claims 1, 4, 6, 10, 21, 22,

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25, 26 and 31 of U.S. patent 5,013,591. Finally, see claims 3, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14 of U.S. patent 5,200,227.

Finally, and with specific reference to the rejection of claim 20 as being indefinite, Applicants respectfully point out that the claim specifically states that the solution is saturated. As one skilled in the art knows, the exact concentration of a saturated solution depends upon the temperature. Potassium hydroxide is commonly sold as a saturated aqueous solution containing 45% (w/w).

Accordingly, in view of the above comments, it is submitted that the claims satisfy the requirements of the 35 USC 112, second paragraph, and reconsideration of the rejection of the claims on this basis is respectfully requested.

Turning to the art rejection, all of the claims have been rejected as anticipated by Maye et al. The Examiner specifically refers to examples 5-8 as teaching using aqueous alkaline solutions of about 35-40% *rho*-iso-α-acids with 6M aqueous solutions of metal salts at 65°C with stirring. Applicant's independent claim 17, requires first heating a concentrated solution of reduced (*rho*-) iso-α-acids in their free acid form to fluid state, and then adding a concentrated aqueous alkaline metal hydroxide solution to the heated solution of reduced (*rho*-) iso-α-acids, with stirring, to form a concentrated solution containing an alkaline metal salt of the reduced (*rho*-) iso-α-acids. Maye doesn't teach this.

As the Examiner is well aware, anticipation under 35 USC 102 requires that each and every claim element be found in a single reference. Since Maye doesn't teach heating a concentrated solution of reduced (*rho*-) iso-α-acids and then adding a concentrated aqueous alkaline metal hydroxide solution to the heated solution of (*rho*-) iso-α-acids, with stirring, as

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required by claim 17, neither claim 17, nor any of the claims dependent directly or indirectly thereon can be said to be anticipated by Maye.

Moreover, Applicant's claims cannot be said to be obvious from Maye. The mention by Maye of pH 5 (Col 5, Line 23) clearly refers to the pH of the solution (of *rho*-iso-α-acids) before addition of the salt solution, not afterwards as the Examiner states. (The starting solution is therefore not necessarily alkaline, as claimed by the examiner). Hence the Examiner's reference to Maye's "above pH 5" statement is misplaced.

Moreover, Maye's process clearly involves a number of steps that are absent in Applicants' claimed invention. Crucially, Maye's process involves the formation of two phases (aqueous and organic) that must be separated from one another. This point is made quite clear in those of Maye et al's examples that describe the full working of their process (see Examples 1 - 20). Dependent upon the metal salt used, in each and every case Maye et al describe either the formation of two layers (see e.g. Example 5, line 34, Example 6, line 47) or a precipitate (see e.g. Example 8, lines 6-7). Indeed, in Lines 23-24 of Col 5 (in the very section quoted by the Examiner) it is clearly stated that "The product is salt precipitated ....".

In Col 2, lines 8-17, Maye state clearly that an embodiment of their invention "... is directed to a process for the production of the solid potassium salt of a hop providing said hop acid is not an alpha acid or a hulupone comprising

(a) heating an aqueous alkaline solution of a hop acid;

(b) adding an aqueous solution of a potassium salt or a solid potassium salt to obtain an organic layer, and

(c) separating the organic layer, and

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(d) drying the organic layer to obtain the solid potassium salt."

Applicants' claimed invention comprises a series of quite different steps, as shown in their Fig. 1, wherein it is seen that their process is quite distinct from that of Maye:

(a) Heat mixture of *rho*-iso-α-acids to fluid state ("Step 10")

(b) Stir heated mixture of *rho*-iso-α-acids ("Step 12")

(c) Add aqueous potassium hydroxide solution to mixture of heated/stirred *rho*-iso-α-acids ("Step 14")

(d) Cool aqueous solution of potassium salts of *rho*-iso-α-acids to room temperature ("Step 16")

Clearly, Applicants' process does not involve either the formation or the separation of separate layers, neither does it require the inclusion of a drying stage as the products of the subject application are highly concentrated, viscous solutions having a significant water content, as distinct from the dry solids prepared by Maye. (See '262, Col 5, Lines 14-15, wherein it is stated: "The total moisture content of the salt should be less than 2%.").

A similar situation pertains to the production of the sodium salt of *rho*-iso-α-acids (see '262, Col 2, Lines 29-34), being another alkali metal salt.

In rejecting the claims as anticipated by Maye, the Examiner appears to substitute as equivalent solutions of metal salts in place of the concentrated alkali metal hydroxide solution. First, as has been made clear above, the process of Maye is not the same as that of the Applicants. Secondly, the substitution of metal salts such as those that are used by Maye simply would not provide Applicants' claimed process. Applicants' claimed process begins with the free acid form of *rho*-iso-α-acids and ends with their conversion to an alkali metal salt. The

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acids are therefore partially or totally neutralized according to the normal requirements of an acid/base reaction:

$RH + MOH \rightarrow MR + H_2O$ (Where in this instance RH represents the free acid form of *rho*-iso-α-acids and M is an alkali metal)

No anions other than those of the *rho*-iso-α-acids themselves are present in the final product. Addition of, for example, the 6M aqueous sodium chloride solution of Maye's Example 7 clearly could not produce this result. Even the addition of the potassium carbonate solution of Maye's Examples 5 and 6 would be problematic, since although the desired neutralization (or partial neutralization) would occur, the resultant generation of first of all bicarbonates and then carbon dioxide gas would not only leave some residues in the product but would also be expected to create undesirable foaming that the applicant's process completely avoids.

In view of the foregoing amendments and comments it is believed the application now is in order for allowance.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,

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USPTO PATENT FULL-TEXT AND IMAGE DATABASE

Searching 1976 to present...

Results of Search in 1976 to present db for:
ACLM/"about": 688269 patents.
*Hits **1** through **50** out of **688269***

Next 50 Hits

Jump To

Refine Search aclm/"about"

	PAT. NO.	Title
1	6,631,522	Method and system for indexing, sorting, and displaying a video database
2	6,631,510	Automatic generation of programmable logic device architectures
3	6,631,509	Computer aided design apparatus for aiding design of a printed wiring board to effectively reduce noise
4	6,631,506	Method and apparatus for identifying switching race conditions in a circuit design
5	6,631,503	Temperature programmable timing delay system
6	6,631,411	Apparatus and method for monitoring a chain of electronic transactions
7	6,631,382	Data retrieval method and apparatus with multiple source capability
8	6,631,376	Exchange servicing development support system with a function of automatic replacement of edited contents
9	6,631,366	Database system providing methodology for optimizing latching/copying costs in index scans on data-only locked tables
10	6,631,363	Rules-based notification system
11	6,631,359	Writeable medium access control using a medium writeable area
12	6,631,357	METHOD OF AND SYSTEM FOR FINDING CONSUMER PRODUCT RELATED INFORMATION ON THE INTERNET USING

USPTO PATENT FULL-TEXT AND IMAGE DATABASE

Searching 1976 to present...

Results of Search in 1976 to present db for:
ACLM/"room temperature": 17126 patents.
*Hits **1** through **50** out of **17126***

Next 50 Hits

Jump To

Refine Search aclm/"room temperature"

	PAT. NO.	Title
1	6,631,243	Air recirculating and heating device
2	6,630,734	Composite material, and manufacturing method and uses of same
3	6,630,252	Magneto-optical recording medium comprising four magnetic layers
4	6,630,239	Compatibilized pressure-sensitive adhesives
5	6,630,209	Method of manufacturing temperature range adjusted coated optical fibers
6	6,630,172	Microbicidal composition containing potassium sodium tartrate
7	6,630,050	Polyurethane adhesive
8	6,630,039	Extrusion method utilizing maximum exit temperature from the die
9	6,629,847	Magnetic display panel and method for producing the same
10	6,629,485	Method of making a non-lead hollow point bullet
11	6,628,574	Reproducing method and reproducing apparatus using plural light beam powers for transferring a magnetic domain
12	6,628,542	Magnetoresistive device and magnetic memory using the same
13	6,627,778	Selective hydrogenation process for removing C10C16 diolefins
14	6,627,665	Non-dusting copper pyrithione dispersion
15	6,627,646	Norastemizole polymorphs

USPTO PATENT FULL-TEXT AND IMAGE DATABASE

Searching 1976 to present...

Results of Search in 1976 to present db for:
ACLM/"substantially": 747046 patents.
*Hits **1** through **50** out of **747046***

Next 50 Hits

Jump To

Refine Search aclm/"substantially"

	PAT. NO.		Title
1	6,631,483	T	Clock synchronization and fault protection for a telecommunications device
2	6,631,461	T	Dyadic DSP instructions for digital signal processors
3	6,631,456	T	Hypercache RAM based disk emulation and method
4	6,631,435	T	Application programming interface for data transfer and bus management over a bus structure
5	6,631,415	T	Method and system for providing a communication connection using stream identifiers
6	6,631,379	T	Parallel loading of markup language data files and documents into a computer database
7	6,631,374	T	System and method for providing fine-grained temporal database access
8	6,631,361	T	Method and apparatus for providing explanations of automated decisions applied to user data
9	6,631,359	T	Writeable medium access control using a medium writeable area
10	6,631,346	T	Method and apparatus for natural language parsing using multiple passes and tags
11	6,631,338	T	Dynamic current calibrated driver circuit
12	6,631,331	T	Database system for predictive cellular bioinformatics

USPTO PATENT FULL-TEXT AND IMAGE DATABASE

Searching 1976 to present...

Results of Search in 1976 to present db for:
ACLM/"slightly": 51650 patents.
*Hits **1** through **50** out of **51650***

Next 50 Hits

Jump To

Refine Search aclm/"slightly"

	PAT. NO.	Title
1	6,631,231	Optical waveguide elements, optical wavelength conversion elements, and process for producing optical waveguide elements
2	6,631,225	Mode coupler between low index difference waveguide and high index difference waveguide
3	6,631,073	Electrode material and method for producing the same
4	6,630,877	Electromagnetic closing and opening device for door leaves that can be pivoted
5	6,630,805	Actively controlled regenerative snubber for unipolar brushless DC motors
6	6,630,635	Universal contact switch
7	6,630,110	Method and apparatus for specialized candle
8	6,630,053	Semiconductor processing module and apparatus
9	6,629,991	Expandable stents and method for making same
10	6,629,900	Collapsible goal frame for ball games
11	6,629,741	Ink jet recording head drive method and ink jet recording apparatus
12	6,629,685	Method and apparatus for pulling wire
13	6,629,679	Wall mount shelving system